

claims. In view thereof, Applicants have added new claims 31-33, which mirror canceled claims 17-19 with base claim 13 incorporated. Therefore, claims 1, 3, 4, 6-16, 20-29 and 31-33 are pending in the instant application.

With respect to Sections 2 and 3 of the Office Action, Applicants have amended the specification, as shown above, to insert the description of step 8 in page 14, line 14. This amendment should also satisfy the drawing objection of Fig. 24 in Section 3. No new matter has been added.

With respect to the rejection of claims 1, 7-16, and 20-29 under 35 U.S.C. 103(a) as being unpatentable over white (U.S. Patent No. 5,237,520) in view of Sundman (U.S. Patent No. 5,449,256), Applicants respectfully traverse.

In the Office Action, the Examiner maintains the opinion that the primary reference, White, teaches Applicants' claimed invention except a three-axis milling machine to mill custom insoles and the specific orientations of the computer, display device, input device, and production machine. Applicants respectfully submit that the White reference is not only deficient in teaching, suggesting, or implying a three-axis milling machine and the specific orientations of the computer, display device, input device, and production machine, as conceded by the Examiner, it also does not teach Applicants' other claimed limitations as recited in claims 1, 7-16, and 20-29.

First, it would be helpful to briefly summarize the foot measurement and footwear sizing system of White. The system disclosed by White includes, among other things, an

electro-optical scanner unit that scans the bottom facing surfaces of a foot that is placed against a reference surface. The system electronically displays the scan of the foot bottom surfaces on a visual display to produce a foot image articulating distances of portions of the foot bottom facing surface from the reference surface. From the scanned image a three-dimensional (3-D) topographical image of a foot is derived and the foot size is computed. The 3-D topographical information is derived by determining the intensity of lightness and darkness portions of the scanned foot image with respect to other portions of the scanned foot image.

According to Fig. 1 of the White reference, the foot measurement information for a particular customer is stored in a storage facility at a retail footwear store (block 102), and, subsequently, such information is electronically transferred to a centralized database (block 104), which provides the measurement information, along with style preference information, to a Computer-Aided Design/Computer Aided Manufacturing (CAD/CAM) device (block 110) generating machine control codes for last manufacturing. The control codes for last manufacturing controls a last production machine (block 112) producing a unique last for customer. The last produced is used to manufacture custom fit footwear and footwear products (block 114). The custom fit footwear that can then eventually be made from a last are insoles, heel cups, metatarsal support, volume adjustment shims, and the like, as mentioned by White.

Applicants respectfully submit that White does not teach suggest, or imply the step of milling a custom-made insole based on transmitted surface coordinates as required in independent claim 1, as White does not teach, suggest, or imply a system for forming custom-made insole that includes a scanning station having at least one moveable laser scanning unit for determining coordinates of an undersurface of the foot, at least one milling station in communication with the scanning station and having a milling assembly for forming custom-made insole, and control means for controlling the operation of the milling assembly based upon the coordinates determined by the laser scanning unit required by independent claim 13.

Clearly, the system taught by White is a complex system of manufacturing that integrates many remote retail stores and supplies custom fitting orders to a separate and remote last manufacturing facility, whereas Applicants' claimed method and system simply make a custom-made insole with a milling station that receives measured data from a laser-based foot scanner.

In view of the above, Applicants respectfully submit that the primary reference, White, is improperly applied in the rejection of independent claims 1 and 13 for the reasons that White does not teach, suggest, or imply a milling machine for making custom-made insoles, and that the product manufactured by the White's disclosed system is a custom fit last, which is a block or form shaped like a human foot and used in making or repairing shoes and footwear articles. Though a custom fit last can be used to make a custom fit insole, it

also can be used to make a myriad of other footwear products, as mentioned by White without providing further supporting or enabling disclosure. With aforementioned significant deficiencies of the White reference, the withdrawal of the rejection of independent claims 1 and 13, and their dependent claims are respectfully solicited.

With regard to the secondary Sundman reference applied in Section 5 of the Office Action, the Examiner conceded that Sundman teaches a milling machine that is required to receive contour data from a floppy disk. Applicants wish to add to the Examiner's concession of the fact that the reduced noise property of the disclosed milling machine is heavily emphasized by the reference; and, without suggestion or motivation of integrating a foot scanner machine to the milling machine and with the admission that two AMFIT machines are separated in different facilities, it is understood in the Sundman reference that the method of transferring contour data to the milling machine is preferably accomplished via a floppy disk.

As understood, the noise concern necessitates the separation of a contour scanner machine located in a separate facility from a milling machine via the remote transferring of contour data through a floppy disk. Therefore, it would not have been obvious to simply move the disk drive to the lower portion of the milling station of Sundman, to place the display and device and input device that are taught by the improperly applied White reference near the milling station, and to place the milling assembly in an upper portion of the milling station as asserted by the Examiner citing *In re Japsike*, 181 F.2d 1019, 86 USPQ

70 (CCPA 1950). Such arrangement of Sundman's milling station near the displays, input, and other devices of White would contradict Sundman's and White's teachings. Moreover, none of the cited references teach, suggest or implies placing a milling machine for making custom insoles in proximity or in communication to a foot scanner.

As much as there are advantages to having a physically and operationally separate milling machine and a foot contour measurement machine because of noise consideration, as disclosed by Sundman, Applicants disclosed and claimed method and apparatus for making a custom made insole are in an advantageous and preferred configuration wherein a laser-based scanner in communication with a milling machine that makes custom made insoles can quickly and accurately provide measured coordinates of an undersurface of a foot thereto.

In view of the above, Applicants respectfully submit that the citing of *In re Japsike*, (Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.), as well as the combination of White and Sundman, is improper. The withdrawal of the rejection of independent claims 1 and 13 and their dependent claims is again respectfully solicited.

Claims 1, 3-4, and 6 stand rejected under 35 U.S.C. 103(a) as being unpatentable over White, and further in view of Sundman and Applicants' alleged admission of prior art on page 8, lines-15. Applicants respectfully traverse for the reasons set forth above in the

argument against the rejection of claim 1. Further, only through impermissible hindsight reconstruction using Applicants' invention would one find the motivation to apply the use of a laser to the systems of White and Sundman to have all the claimed feature, including directing a non-focused fan-shaped line of laser light along the undersurface and sides of a foot, determining a 3-D map of the undersurface of a foot using such laser light, and utilizing a plurality of laser scanning units.

The Examiner has failed to indicate the language in the cited prior art references that suggests or motivates one of ordinary skill in the art to modify the disclosures of the misapplied White and Sundman references to utilize a non-focused fan-shaped line of laser light along the undersurface and sides of a foot. Thus, a prima facie case of obviousness has not been established.

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination. In re Geiger 815 F2d 686 (Fed. Cir. 1987), 2 USPQ2d 1276; In re Fine 837 F2d 1071, 5 PQ2d 1596 (Fed. Cir. 1988).

Applicants respectfully submit that one of ordinary skill in the art would not have been motivated to modify the teachings of White and Sundman and combine them with a laser using a non-focused and fan-shaped beam because there is no teaching or suggestion in the cited references regarding how or why to modify the Sundman's milling machine and

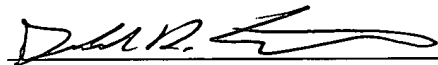
White's foot measurement system to achieve applicants' invention as recited in claims 1, 3-4, and 6.

In view of the arguments set forth above, the rejection of claims 1, 3-4, and 6 under 35 U.S.C. 103 is improper and requested to be withdrawn.

CONCLUSION

Having responded to all objections and rejections set forth in the outstanding Office Action, it is submitted that claims 1, 3-4, 6-29, and 31-33 are in condition for allowance and Notice to that effect is respectfully solicited. In the event that the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, he is courteously requested to contact applicant's undersigned representative.

Respectfully submitted,


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